

FPSOs In The Gulf of Mexico

Herndon, Virginia

May 22, 2002

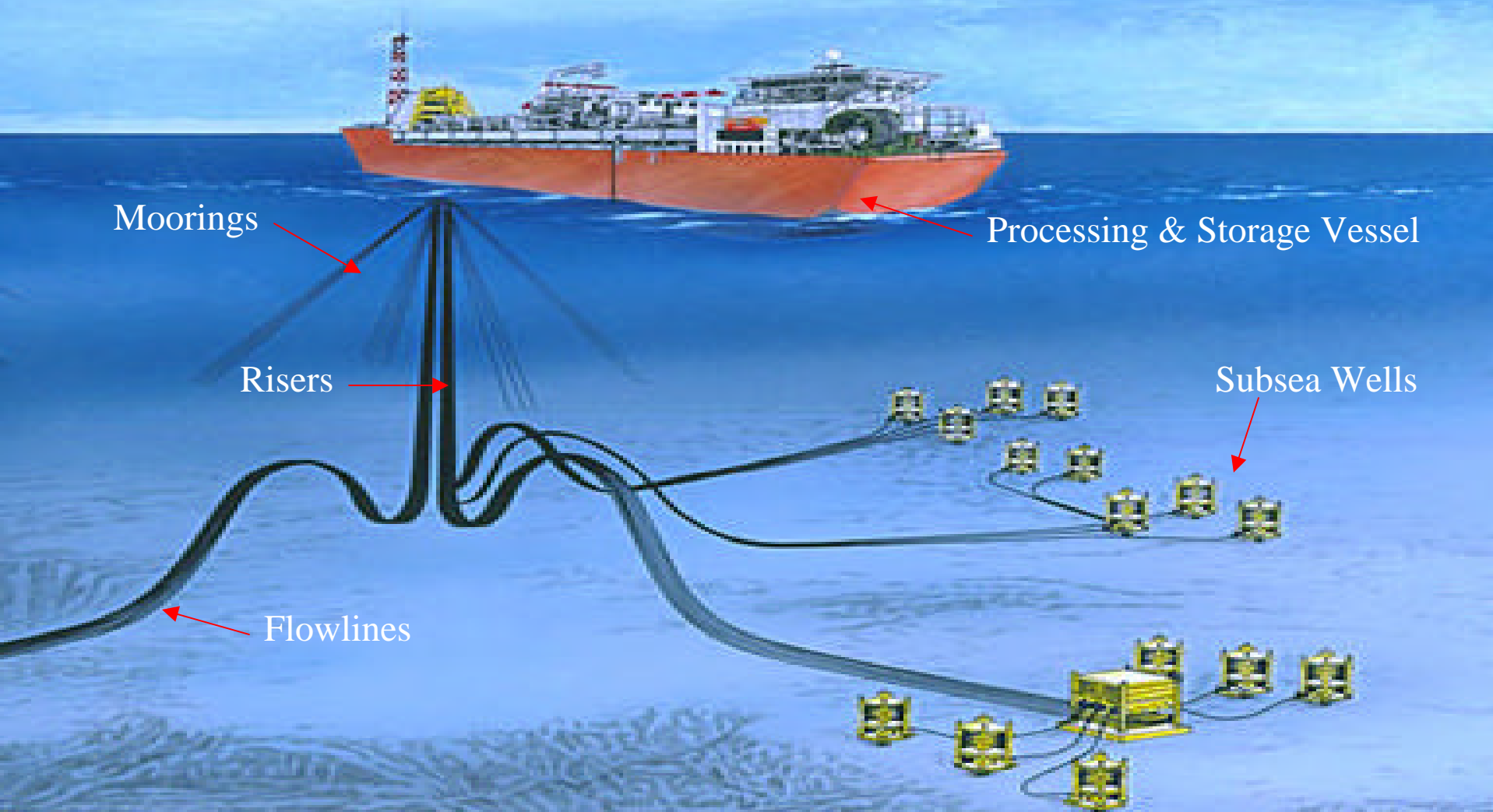
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Conoco, Inc.

Presentation Objectives

- FPSOs are proven technology used worldwide
- FPSOs are an option that make sense in some Gulf of Mexico developments and if utilized, should provide benefits outside the oil industry
- FPSO regulatory issues are progressing nicely
- There are some deepwater technology advancements that could be important to FPSOs

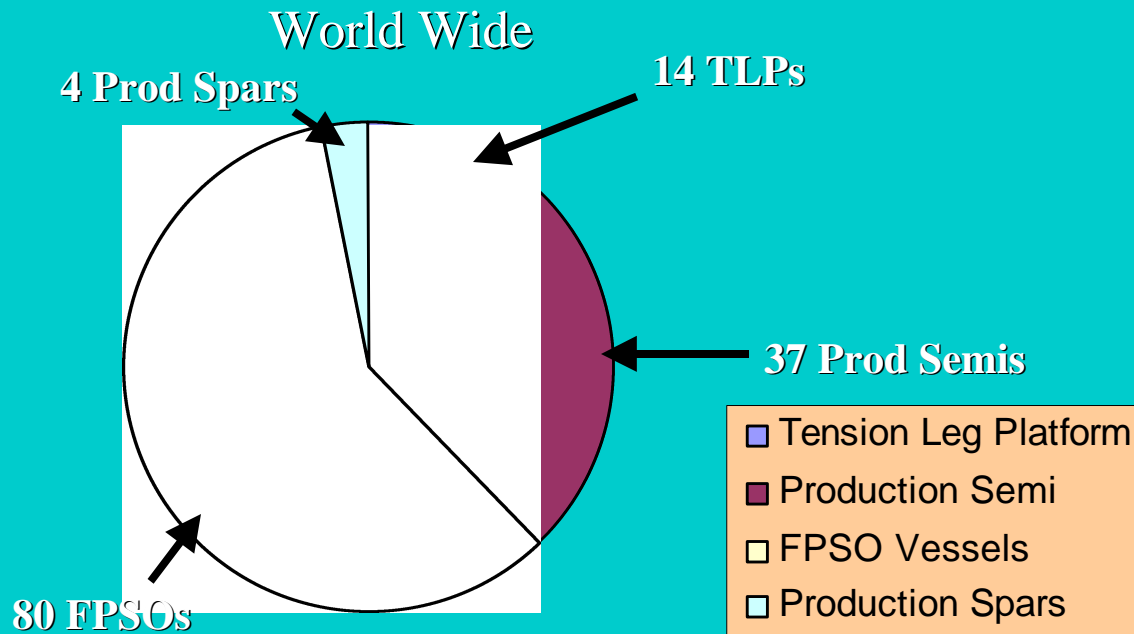
TYPICAL FPSO PRODUCTION SYSTEM



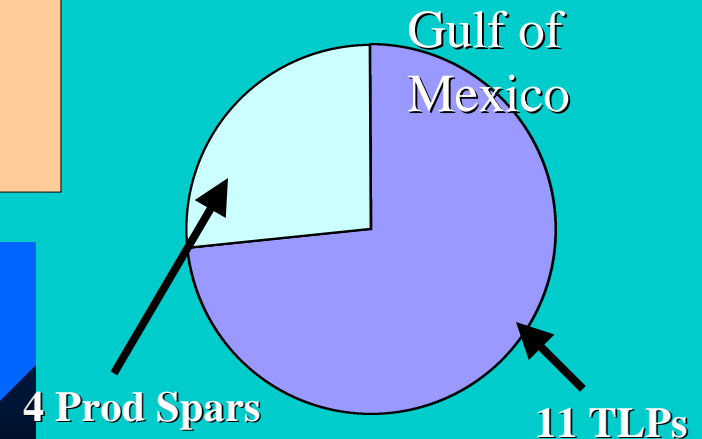
FPSOs ARE PROVEN TECHNOLOGY



Floating Systems Worldwide vs GOM



No FPSOs currently in Gulf of Mexico



FPSOs are used more world wide than any other floating system

FPSO Industry Benefits

■ Energy Industry

- Adds another tool to development options in the Deepwater Gulf of Mexico
- Possibly the only viable economic solution for some field situations
 - » Fields that are remote to existing infrastructure
 - » Sequential development of marginal fields that cannot support their own transportation infrastructure
- Fit the typical deepwater sustainable development approach by being fully redeployable assets

Deepwater and FPSO Benefits Outside Energy Industry

- Increases domestic reserves and energy security
- Increases revenues to the Treasury via lease bonuses, royalties and income tax



Deepwater and FPSO Benefits Outside Energy Industry

- FPSOs and attendant Shuttle Fleet should provide US jobs
 - FPSO hulls probably built outside the US
 - Shuttle Tankers must be built in the US and double hulled
 - Provides additional employment opportunities for US merchant marine officers and crew



Regulatory Consideration

■ EIS completion

- Moved FPSOs toward more equal regulatory footing with current Deep Water GOM development options

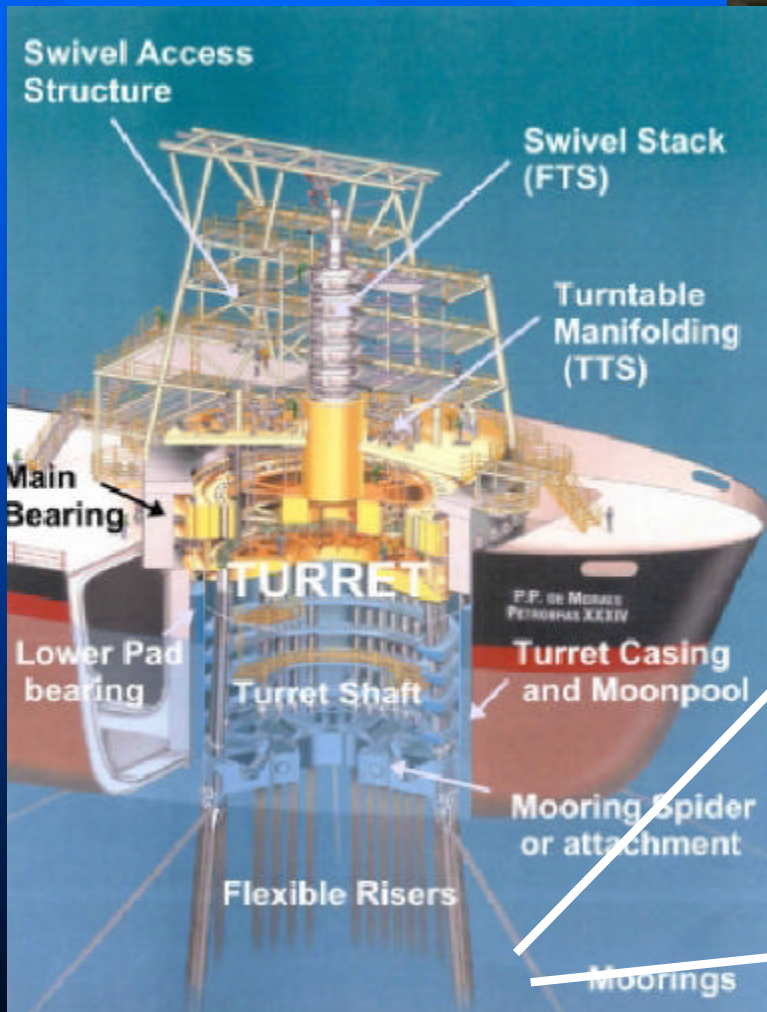
■ MMS and USCG have joint regulations and MOU

- Allow industry to start FPSO approval process on individual discoveries
- Outstanding issues which remain to be addressed are:
 - » Joint jurisdiction issues, system specific lead role
 - » Shuttle tanker/ FPSO interface jurisdictional issues

Technology Issues Related To FPSOs

- Issues related to water depth
 - Mooring and riser materials
- And reservoir pressure
 - Swivel design within the turret
- And the ability to cost effectively transport gas in deeper waters
 - Pipelines
 - Compressed Natural Gas Vessels

Mooring Developing Technology

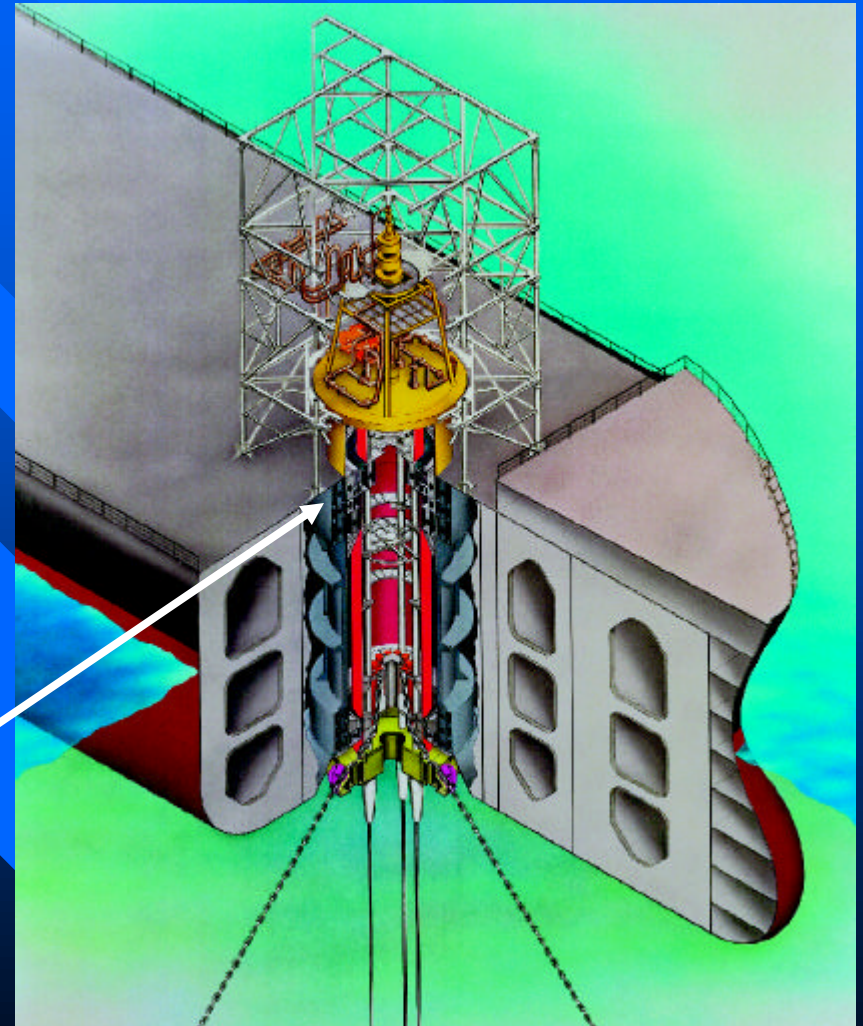


Riser Developing Technology



Composites can be used to decrease weight of risers in deeper waters

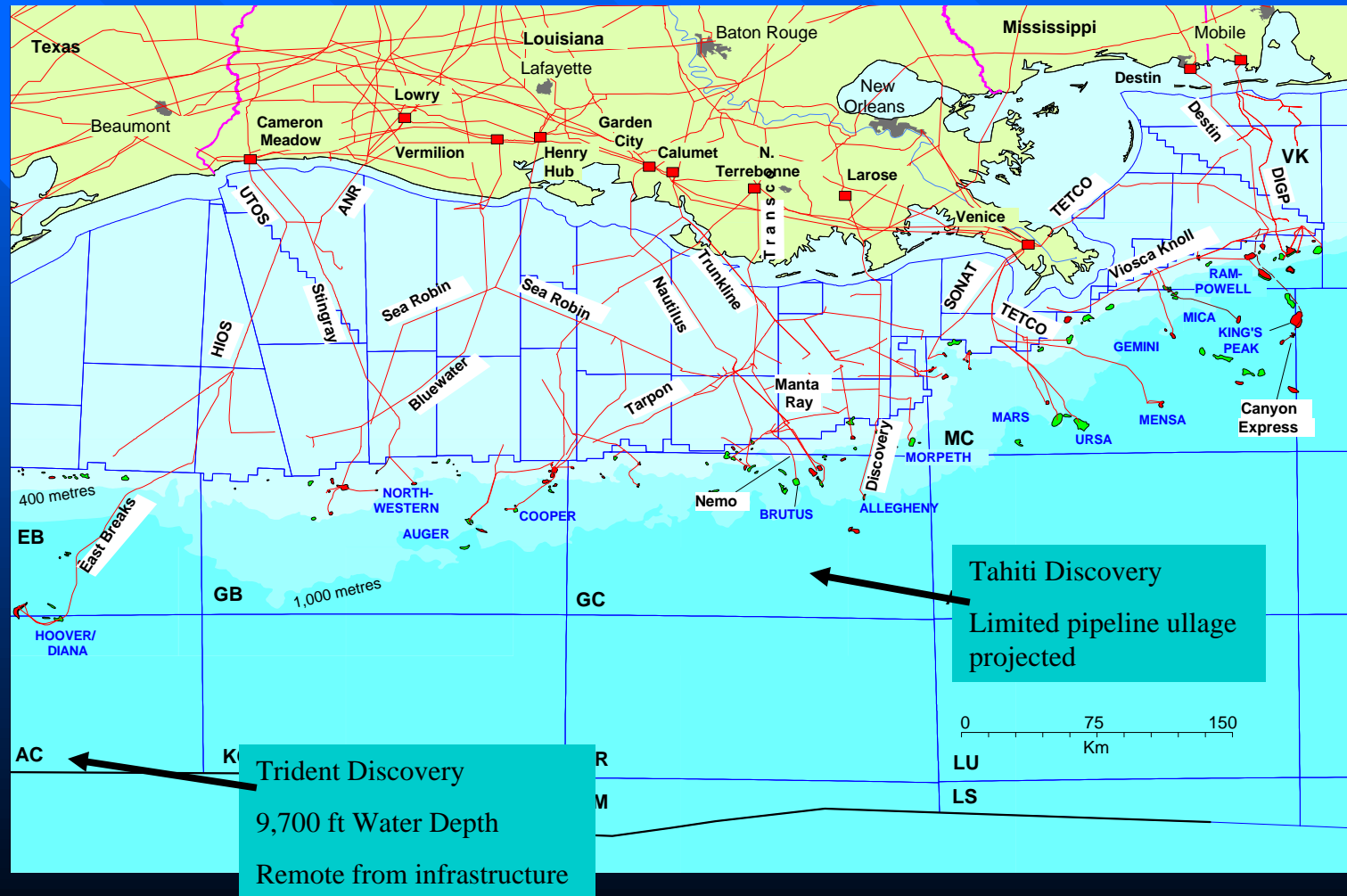
Swivel Technology Considerations



The swivel component of the turrets must be designed to be capable of handling the higher reservoir pressures likely to be found in the Deepwater Gulf of Mexico

Existing Gas Pipeline Infrastructure

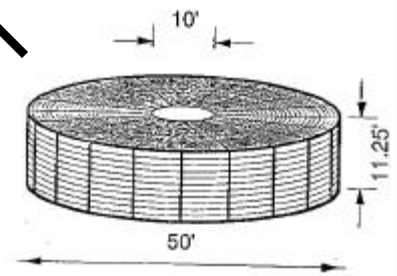
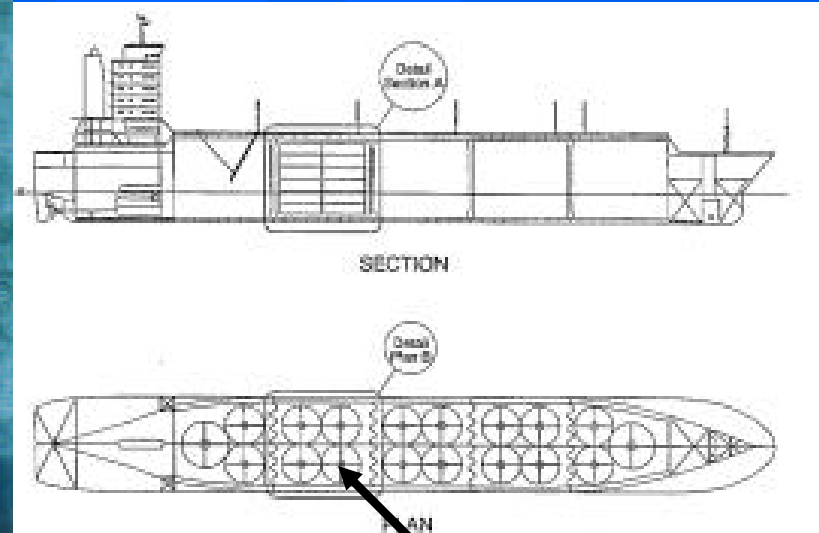
Two recent discoveries are potential FPSO candidates



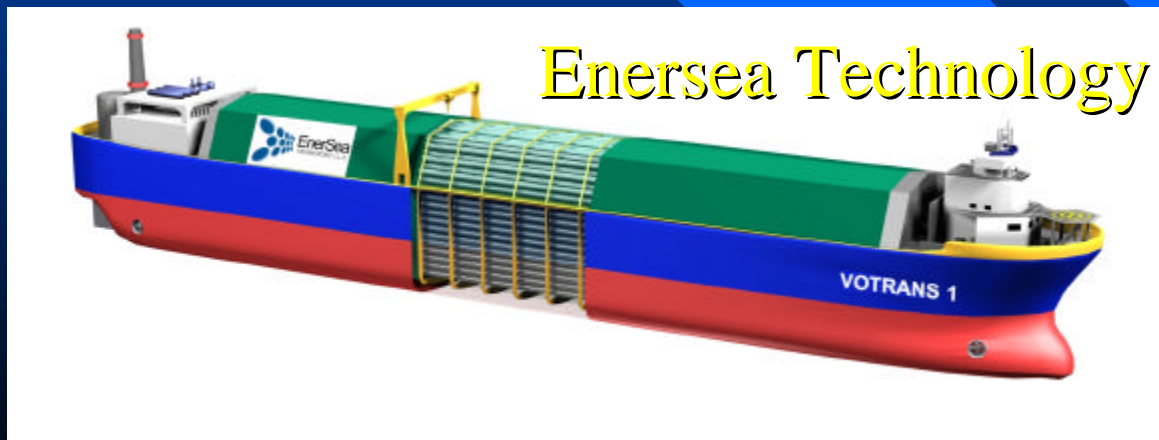
Gas Transportation Developments

Compressed Natural Gas

Coselle Technology



Enersea Technology



Questions?

